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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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STITES & HARBISON PLLC
1199 NORTH FAIRFAX STREET
SUITE 900
ALEXANDRIA, VA 22314

EXAMINER	
DEVI, SARVAMANGALA J N	
ART UNIT	**PAPER NUMBER**
1645	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/964,858	HOSTETTER ET AL.	
	Examiner	Art Unit	
	S. Devi, Ph.D.	1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9,11,16 and 18-32* is/are pending in the application.

4a) Of the above claim(s) *5-8,16,18-22 and 24-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,9,11,23,31 and 32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *72605*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Sequence alignments (3 pages)*.

REQUEST FOR CONTINUED EXAMINATION

1) A request for continued 01/13/05 examination under 37 C.F.R 1.114, including the fee set forth in 37 C.F.R 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 C.F.R 1.114, and the fee set forth in 37 C.F.R 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 C.F.R 1.114. Applicants' submission filed on 12/27/04 has been entered.

Applicants' Amendment

2) Acknowledgment is made of Applicants' amendment filed 12/27/04 in response to the final Office Action mailed 11/25/03.

Status of Claims

3) Claim 14 has been canceled and claim 1 has been amended via the amendment filed 12/27/04.

New claims 31 and 32 have been added via the amendment filed 12/27/04.

Claims 1, 3-9, 11, 16, 23 and 18-32 are pending in this application.

Claims 1, 3, 4, 9, 11, 23, 31 and 32 are under examination.

The Hostetter Declaration

4) Acknowledgment is made of the Hostetter Declaration filed 01/06/05, which has been fully considered. See paragraph 19 below.

Information Disclosure Statement

5) Acknowledgment is made of is made of Applicants' information disclosure statement filed 07/26/05. The information referred to therein has been considered and a signed copy is attached to this Office Action. The previously cited reference(s) is lined through.

Prior Citation of Title 35 Sections

6) The text of those sections of Title 35 U.S. Code not included in this action can be found in a prior Office Action.

Prior Citation of References

7) The references cited or used as prior art in support of one or more rejections in the instant Office Action and not included on an attached form PTO-892 or form PTO-1449 have been previously cited and made of record.

Rejection(s) Moot

8) The rejection of claim 14 made in paragraph 13(a) of the Office Action mailed 05/07/03 and maintained in paragraph 22 of the Office Action mailed 11/25/03 under 35 U.S.C. § 112, second paragraph, as being indefinite, is moot in light of Applicants' cancellation of the claim.

9) The provisional rejection of claim 14 made in paragraph 11 of the Office Action mailed 05/07/03 and maintained in paragraph 23 of the Office Action mailed 11/25/03 under the judicially created doctrine of obviousness-type double patenting over claims 28, 29, 40-42, 45, 46 and 48 of the co-pending application 09/978,343, is moot in light of Applicants' cancellation of the claim.

10) The rejection of claim 14 made in paragraph 15 of the Office Action mailed 05/07/03 and maintained in paragraph 22 of the Office Action mailed 11/25/03 under 35 U.S.C. § 102(b) as being anticipated by Hostetter *et al.* (US 5,886,151 - Applicants' IDS) ('151), is moot in light of Applicants' cancellation of the claim.

11) The rejection of claim 14 made in paragraphs 27(b) and 27(c) of the Office Action mailed 11/25/03 under 35 U.S.C § 112, second paragraph, as being indefinite, is moot in light of Applicants' cancellation of the claim.

Rejection(s) Withdrawn

12) The rejection of claim 1 made in paragraph 27(a) of the Office Action mailed 11/25/03 under 35 U.S.C § 112, second paragraph, as being indefinite, is withdrawn in light of Applicants' amendment to the claim.

13) The rejection of claim 3 made in paragraph 27(b) of the Office Action mailed 11/25/03 under 35 U.S.C § 112, second paragraph, as being indefinite, is withdrawn in light of Applicants' amendment to the claim.

14) The rejection of claims 3, 9, 11 and 23 made in paragraph 27(c) of the Office Action mailed 11/25/03 under 35 U.S.C § 112, second paragraph, as being indefinite, is withdrawn in light of Applicants' amendment to the base claim.

15) The provisional rejection of claims 1, 3, 4 and 23 made in paragraph 11 of the Office Action mailed 05/07/03 and maintained in paragraph 23 of the Office Action mailed 11/25/03 under the judicially created doctrine of obviousness-type double patenting over claims 28, 29, 40-42, 45, 46, 48 and 60 of the co-pending application 09/978,343, is withdrawn since the application is no more

co-pending. A new rejection is made below over the claims of the patent issued from this application.

16) The rejection of claims 1, 3 and 4 made in paragraph 15 of the Office Action mailed 05/07/03 and maintained in paragraph 24 of the Office Action mailed 11/25/03 under 35 U.S.C. § 102(b) as being anticipated by Hostetter *et al.* (US 5,886,151 - Applicants' IDS) ('151), is withdrawn. A modified rejection is set forth below.

17) The rejection of claims 1 and 9 made in paragraph 18 of the Office Action mailed 05/07/03 and maintained in paragraph 25 of the Office Action mailed 11/25/03 under 35 U.S.C. § 103(a) as being unpatentable over Hostetter *et al.* (US 5,886,151 - Applicants' IDS) ('151), is withdrawn. A modified rejection is set forth below.

18) The rejection of claims 1 and 11 made in paragraph 19 of the Office Action mailed 05/07/03 and maintained in paragraph 25 of the Office Action mailed 11/25/03 under 35 U.S.C. § 103(a) as being unpatentable over Hostetter *et al.* (US 5,886,151 - Applicants' IDS) ('151), is withdrawn. A modified rejection is set forth below.

Response to Applicants' Arguments

19) With regard to the teachings of Hostetter *et al.* ('151), Applicants submit a declaration by Dr. Hostetter and contend that the '151 patent does not disclose or suggest antibodies 'which could prevent cleavage of the superantigen and inhibition of T lymphocyte activation'. Applicants state that the ability of the prior art antibodies to block adhesion of *Candida* to epithelial cells is irrelevant to the unrelated ability of specific antibodies, not previously known or observed, to prevent the cleavage of the propeptide and thus inhibit T lymphocyte activation. The Hostetter declaration asserts that the '151 patent does not disclose the antibody of the instant invention which could inhibit T lymphocyte activation caused by *Candida albicans* by specifically binding to the propeptide and preventing its cleavage wherein it would become a superantigen. Applicants assert that the instantly claimed antibody has the ability to inhibit T lymphocyte activation and prevent cleavage of the propeptide. The declarant submits that the prior art antibodies were not directed to the amino terminal region containing the superantigen moiety and that they did not exhibit the unexpected properties of the presently claimed antibody, namely, inhibiting the activation of T lymphocytes. The declarant submits additional data obtained with two 'monoclonal antibodies' which showed inhibition of T lymphocyte activation.

Applicants' arguments have been carefully considered, but are not persuasive. It is noted that the instant claims are not limited to the two monoclonal antibodies that are described in the Hostetter declaration, Mab 163.5 and Mab 253.4, which are shown to inhibit T lymphocyte activation caused by *Candida albicans*. The base claim 1, as presented currently, or any other claims under examination, do not recite the *two* allegedly unexpected properties of the claimed antibody: (a) the ability to prevent cleavage of the propeptide; *and* (b) the ability to inhibit T lymphocyte activation caused by *Candida albicans*. Secondly, the instantly claimed antibody does not exclude a polyclonal antibody specific to the propeptide of the Int1p protein of *Candida albicans*. Despite the fact that the '151 patent is silent about the two functional properties of the polyclonal antibodies specific to the disclosed SEQ ID NO: 3, at least some antibodies in the polyclonal preparation that are specific to the amino acid sequence of the propeptide fragment, SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR (see Table 3 of the '151 patent), would be expected to inherently have the ability to prevent the cleavage of the propeptide and the ability to inhibit T lymphocyte activity in a host cell, because the SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR amino acid sequence comprises within it what Applicants describe as the MHC-II binding peptide containing amino acids 239-254 of the 1-263 propeptide region (indicated in bold). Since it is well known in the art that a polyclonal antiserum comprises a mixture of antibodies of varied specificities, at least some SEQ ID NO: 3-directed polyclonal antibodies disclosed by the '151 patent would be expected to be specific to the SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR amino acid sequence from the 1-263 residue-region of the instantly recited propeptide. For example, Nakamura (*Clin. Physiol. Biochem.* 1: 160-172, 1983) taught that a polyclonal antiserum (i.e., containing polyclonal antibodies) advantageously serves as a mixture of antibodies of varied specificities, which finger-print and identify the target antigen (see left column on page 161). Due to these reasons, Hostetter *et al.* ('151) is maintained as a valid prior art reference. See art rejections below.

Double Patenting

20) The non-statutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir.

1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970) and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 C.F.R 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 C.F.R 3.73(b).

An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). See e.g., *In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998)*; *In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993)*; *In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir, 1985)*.

21) Claims 1, 3, 4, 23, 31 and 32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-15 and 33-37 of the US Patent 6,774,219 ('219) as evidenced by Nakamura (*Clin. Physiol. Biochem.* 1: 160-172, 1983).

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 6-15 and 33-37 of the U.S. Patent 6,774,219 fall within the scope of the instant claims, or in other words, instant claims are anticipated by claims 6-15 and 33-37 of the US patent 6,210,685. The isolated and purified monoclonal and polyclonal antibody to a polypeptide having the amino acid sequence of SEQ ID NO: 3 of the issued patent anticipates the instantly claimed antibody. Although the claims of the issued patent do not expressly recite the capability of the polyclonal antibody, as recited in the instant claims, since the amino acid sequence of SEQ ID NO: 3 of the issued patent shares a large fragment, DEDTNASVPPTPPLHTTKPTFAQLLNKNNEVNSEPEALTDMKLKR, with the 1-263 amino acid residues of the instantly recited SEQ ID NO. 1, that antibody population from the '219 patent's polyclonal antibodies which is specific to the above-identified common fragment is expected to have the same functions as recited in the instant claims in light of what is well known in the art. For

example, Nakamura taught that a polyclonal antiserum (i.e., containing polyclonal antibodies) advantageously serves as a mixture of antibodies of varied specificities, which finger-print and identify the target antigen (see left column on page 161).

Rejection(s) under 35 U.S.C. § 112, First Paragraph (New Matter)

22) Claims 31 and 32 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

New claim 31 and 32 include the limitations: said antibody is capable of inhibiting T lymphocyte 'activity in a host cell' and 'wherein the host cell is selected from the group consisting of epithelial and endothelial cells' respectively. However, there is no descriptive support for these new limitations in the specification, as originally filed. Therefore, the above-identified new limitations in the new claims are considered to be new matter. *In re Rasmussen*, 650 F2d 1212 (CCPA, 1981). New matter includes not only the addition of wholly unsupported subject matter but also, adding specific percentages or compounds after a broader original disclosure, or even omission of a step from a method. See M.P.E.P 608.04 to 608.04(c).

Applicants are respectfully requested to point to the descriptive support in the specification as filed, for the newly added limitations, or remove the new matter from the claims.

Rejection(s) under 35 U.S.C § 112, Second Paragraph

23) Claims 1, 3, 4, 9, 11, 23, 31 and 32 are rejected under 35 U.S.C § 112, second paragraph, as being indefinite, for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

(a) Claim 1 is vague and indefinite in the limitation: 'the propeptide of the Int1p protein of *Candida albicans* having the amino acid residues 1-263 of the amino acid sequence of SEQ ID NO: 1', because it is unclear whether the amino acid residues 1-263 represent the propeptide or the Int1p protein. It is suggested that Applicants replace the limitation with --the propeptide of the Int1p protein of *Candida albicans* wherein the propeptide consists of the amino acid residues 1-263 of the amino acid sequence of SEQ ID NO: 1--, since such a limitation is supported at the top of page 12 of the instant specification.

(b) Claim 3 is vague and indefinite in the limitation 'the cleaving of the propeptide',

because it is unclear wherefrom the propeptide is cleaved. Is the cleaving within the propeptide prevented, or the cleaving of the whole propeptide from *Candida albicans* cells, or from the Int1p protein of *Candida albicans* prevented?

(c) Claims 3, 4, 9, 11, 23, 31 and 32, which depend directly or indirectly from claim 1, are also rejected as being indefinite because of the indefiniteness identified above in the base claim.

Rejection(s) under 35 U.S.C. § 102

24) The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> *(e)* the invention was described in:
> *(2)* a patent granted on an application for patent by another filed in the United States before the invention by the Applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

25) Claims 1, 3, 4, 31 and 32 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hostetter *et al.* (US 5,886,151, already of record) ('151) as evidenced by Nakamura (*Clin. Physiol. Biochem.* 1: 160-172, 1983, already of record).

It is noted that the instantly recited 1-263 amino acids of SEQ ID NO: 1, i.e., the propeptide, comprises within it the MHC-II binding peptide from amino acid 239 through 254, FAQLLNKNNEVNSEPE. See paragraph [0034] and Figure 17 of the instant specification.

Hostetter *et al.* ('151) disclosed antibodies to the Int1p protein of *Candida albicans* and to fragments or peptides thereof. The Int1p protein of *Candida albicans* has the amino acid sequence of SEQ ID NO: 2, and a peptide thereof comprising 236 amino acids near the amino terminus of the Int1p protein having the amino acid sequence of SEQ ID NO: 3. The prior art amino acid sequence of SEQ ID NO: 2 comprises amino acid residues 1-263 of the instantly recited SEQ ID NO: 1; and the prior art amino acid sequence of SEQ ID NO: 3 comprises the amino acid residues 218 to 263 of the instantly recited SEQ ID NO: 1 (see the attached sequence search reports). The antibodies are able to block *Candida albicans* adhesion to epithelial cells by 30-50%. See abstract; Tables 2 and 3; 'Summary of the Invention' in column 2; first paragraph in column 13; and last two paragraphs in column 4. Hostetter's polyclonal antibodies to Int1p peptides of *Candida albicans* also recognize the Int1p surface expressed in *Saccharomyces cerevisiae* (see lines 28-30 In column 5).

Because of 100% sequence match between the prior art peptide from amino acid residues 1 to 46 of SEQ ID NO: 3 and amino acid residues 218 to 263 of the instantly recited SEQ ID NO: 1, the prior art polyclonal antibody to SEQ ID NO: 3 necessarily includes an antibody that can bind to the 1-263 residues-propeptide of the Int1p protein of *Candida albicans*. Despite the fact that the '151 patent is silent about the two functional properties of the polyclonal antibodies specific to the disclosed SEQ ID NO: 3, at least some antibodies in the polyclonal preparation that are specific to the amino acid sequence of the propeptide fragment, SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR (see Table 3 of the '151 patent), would be expected to inherently have the ability to prevent the cleavage of the propeptide, and the ability to inhibit T lymphocyte activity in a host cell such as endothelial or epithelial cell, because the SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR amino acid sequence comprises within it what Applicants describe as the MHC-II binding peptide containing amino acids 239-254 of the 1-263 propeptide region (indicated in bold). Since it is well known in the art that a polyclonal antiserum comprises a mixture of antibodies of varied specificities, at least some SEQ ID NO: 3-directed polyclonal antibodies disclosed by the '151 patent would be expected to be specific to the SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR amino acid sequence from the 1-263 residue-region of the instantly recited propeptide. For example, Nakamura taught that a polyclonal antiserum (i.e., containing polyclonal antibodies) advantageously serves as a mixture of antibodies of varied specificities, which finger-print and identify the target antigen (see left column on page 161). The capability to prevent the cleaving of the propeptide and inhibiting T lymphocyte activity in a host cell such as epithelial or endothelial cell as recited by Applicants is viewed as an inherent property inseparable from the antibody of Hostetter *et al.* ('151).

Claims 1, 3, 4, 31 and 32 are anticipated by Hostetter *et al.* ('151). The reference of Nakamura is **not** used as a secondary reference in combination with the reference of Hostetter *et al.* ('151), but rather is used to show that every element of the claimed subject matter is disclosed by Hostetter *et al.* ('151) with the unrecited limitation(s) being inherent as evidenced by the state of the art. See *In re Samour* 197 USPQ 1 (CCPA 1978).

26) Claims 1, 3, 4, 23, 31 and 32 are rejected under 35 U.S.C. § 102(e)(2) as being anticipated by Hostetter *et al.* (US 6,774,219) ('219).

It is noted that the instantly recited 1-263 amino acids of SEQ ID NO: 1, i.e., the propeptide, comprises within it the MHC-II binding peptide from amino acid 239 through 254, FAQLLNKNNEVNSEPE. See paragraph [0034] and Figure 17 of the instant specification.

Hostetter *et al.* ('219) disclosed an isolated and purified monoclonal and polyclonal antibody to a 236 amino acid-long polypeptide comprising the amino acid sequence of SEQ ID NO: 3. See claims 6-15. The 236 amino acid-long sequence near the amino terminus of the Int1p protein is a functional domain having the amino acid sequence of SEQ ID NO: 3 as depicted in Table 3. The prior art amino acid sequence of SEQ ID NO: 2 comprises amino acid residues 1-263 of the instantly recited SEQ ID NO: 1; and the prior art amino acid sequence of SEQ ID NO: 3 comprises the amino acid residues 218 to 263 of the instantly recited SEQ ID NO: 1 (see the attached sequence search reports). This sequence of SEQ ID NO: 3, or 'a portion' thereof is believed to encompass the ligand binding site or a portion thereof, and could be used as a vaccine itself, or it provides very useful antibodies (see lines 29-36 in column 17). The antibody blocks (i.e., inhibits) *Candida albicans* adhesion to epithelial and/or endothelial cells (see claims 6-15). Because of 100% sequence match between the prior art peptide from amino acid residues 1 to 46 of SEQ ID NO: 3 and amino acid residues 218 to 263 of the instantly recited SEQ ID NO: 1, the prior art monoclonal or polyclonal antibody to SEQ ID NO: 3 necessarily includes an antibody that can bind to the 1-263 residues-long propeptide of the Int1p protein of *Candida albicans*. Despite the fact that the '151 patent is silent about the two functional properties of the polyclonal antibodies specific to the disclosed SEQ ID NO: 3, the monoclonal antibody to SEQ ID NO: 3 and at least some antibodies in the polyclonal preparation that are specific to the amino acid sequence of the propeptide fragment, SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR (see Table 3 of the '219 patent), would be expected to inherently have the ability to prevent the cleavage of the propeptide, and the ability to inhibit T lymphocyte activity in a host cell such as endothelial or epithelial cell, because the SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR amino acid sequence comprises within it what Applicants describe as the MHC-II binding peptide containing amino acids 239-254 of the 1-263 propeptide region (indicated in bold). Since it is well known in the art that a polyclonal antiserum comprises a mixture of antibodies of varied specificities, at least some SEQ ID NO: 3-directed polyclonal antibodies disclosed by the '219 patent would be expected

to be specific to the SDEDTNASVPPTPPLHTTKPT**FAQLLNKNNEVNSEPE**ALTDMKLKR amino acid sequence from the 1-263 residue-region of the instantly recited propeptide. For example, Nakamura taught that a polyclonal antiserum (i.e., containing polyclonal antibodies) advantageously serves as a mixture of antibodies of varied specificities, which finger-print and identify the target antigen (see left column on page 161). The capability to prevent the cleaving of the propeptide and inhibiting T lymphocyte activity in a host cell such as epithelial or endothelial cell as recited by Applicants is viewed as an inherent property inseparable from the antibody of Hostetter *et al.* ('219).

Claims 1, 3, 4, 23, 31 and 32 are anticipated by Hostetter *et al.* ('219). The reference of Nakamura is **not** used as a secondary reference in combination with the reference of Hostetter *et al.* ('219), but rather is used to show that every element of the claimed subject matter is disclosed by Hostetter *et al.* ('219) with the unrecited limitation(s) being inherent as evidenced by the state of the art. See *In re Samour* 197 USPQ 1 (CCPA 1978).

Rejection(s) under 35 U.S.C. § 103

27) Claim 9 is rejected under 35 U.S.C § 103(a) as being unpatentable over Hostetter *et al.* (US 5,886,151, already of record) ('151) or Hostetter *et al.* (US 6,774,219) ('219) as applied to claim 1 above.

The teachings of Hostetter *et al.* ('151 or '219) are explained above which do not disclose the presence of a pharmaceutical carrier, vehicle or diluent along with their antibody.

However, adding an art-known pharmaceutical carrier, vehicle or diluent, to an art-disclosed antibody was well known and routinely practiced in the art at the time of the instant invention, for the purpose of providing an antibody composition for diagnostic or *in vivo* use. Therefore, it would have been *prima facie* obvious to one of skill In the art at the time the invention was made to add an art-known diluent, such as saline or PBS, to Hostetter's ('151 or '219) antibody to produce the instant invention, with a reasonable expectation of success. One of skill in the art would have been motivated to produce the instant invention for the expected benefit of presenting Hostetter's ('151 or '219) antibody as a composition for diagnostic or *in vivo* use, or for commercializing Hostetter's ('151 or '219) antibody as a composition.

Claim 9 is *prima facie* obvious over the prior art of record.

28) Claim 11 is rejected under 35 U.S.C § 103(a) as being unpatentable over Hostetter *et al.* (US

5,886,151, already of record) ('151) or Hostetter *et al.* (US 6,774,219) ('219) as applied to claim 1 above.

The teachings of Hostetter *et al.* ('151 or '219) are explained above which do not expressly mention the term 'diagnostic kit' In connection with the antibody and the use of a detection means.

However, methods of assembling a diagnostic kit using an art-disclosed antibody and an art-known detection reagent were well known and routinely practiced in the art. Therefore, it would have been *prima facie* obvious to one of ordinary skill In the art at the time the invention was made to assemble or produce a diagnostic kit for diagnostic purposes using the antibody of Hostetter *et al.* ('151 or '219) and an art-known detection reagent to produce the instant invention with a reasonable expectation of success. A skilled artisan would have been motivated to produce the instant invention for the expected benefit of making readily available Hostetter's ('151 or '219) antibody reagent, or for commercializing Hostetter's ('151 or '219) antibody for diagnostic use.

Claim 11 is *prima facie* obvious over the prior art of record.

Remarks

29) Claims 1, 3, 4, 9, 11, 31 and 32 stand rejected.

30) Papers related to this application may be submitted to Group 1600, AU 1645 by facsimile transmission. Papers should be transmitted via the PTO Fax Center which receives transmissions 24 hours a day and 7 days a week. The transmission of such papers by facsimile must conform with the notice published in the Official Gazette, 1096 OG 30, November 15, 1989. The central Fax number for submission of amendments, responses and papers is (571) 273-8300.

31) Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAG or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.Mov. Should you have questions on access to the Private PAA system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

32) Any inquiry concerning this communication or earlier communications from the Examiner should be directed to S. Devi, Ph.D., whose telephone number is (571) 272-0854. The Examiner can normally be reached on Monday to Friday from 7.15 a.m. to 4.15 p.m. except one day each bi-

week, which would be disclosed on the Examiner's voice mail system. A message may be left on the Examiner's voice mail system.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lynette Smith, can be reached on (571) 272-0864.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

S. DEVI, PH.D.
PRIMARY EXAMINER

```
RESULT 4
US-09-978-343-2
; Sequence 2, Application US/09978343
; Patent No. 6774219
;  GENERAL INFORMATION:
;       APPLICANT: HOSTETTER, MARGARET K.
;                  GALE, CHERYL A.
;                  BENDEL, CATHERINE M.
;                  TAO, NIAN-JUN
;                  KENDRICK, KATHLEEN
;       TITLE OF INVENTION: CANDIDA ALBICANS GENE, INTEGRIN-LIKE
;                           PROTEIN, ANTIBODIES, AND METHODS OF USE
;       NUMBER OF SEQUENCES: 12
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: MUETING, RAASCH, GEBHARDT & SCHWAPPACH, P.A.
;            STREET: 119 NORTH FOURTH STREET, SUITE 203
;            CITY: MINNEAPOLIS
;            STATE: MINNESOTA
;            COUNTRY: USA
;            ZIP: 55401
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/978,343
;            FILING DATE: 15-Oct-2001
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: US 08/642,846
;            FILING DATE: 03-MAY-1996
;       ATTORNEY/AGENT INFORMATION:
;            NAME: MUETING, ANN M.
;            REGISTRATION NUMBER: 33,977
;            REFERENCE/DOCKET NUMBER: 110.00280101
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 612-305-1217
;            TELEFAX: 612-305-1228
;  INFORMATION FOR SEQ ID NO: 2:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 1664 amino acids
;            TYPE: amino acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-978-343-2

  Query Match           100.0%;  Score 1386;  DB 4;  Length 1664;
  Best Local Similarity  100.0%;  Pred. No. 3.3e-115;
  Matches  263;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Amino acids 1-263 of SEQ ID No. 2.

```
Qy          1 MNSTPSKLLPIDKHSHLQLQPQSSSASIFNSPTKPLNFPRTNSKPSLDPNSSSDTYTSEQ 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNSTPSKLLPIDKHSHLQLQPQSSSASIFNSPTKPLNFPRTNSKPSLDPNSSSDTYTSEQ 60

Qy         61 DQEKGKEEKKDTAFQTSFDRNFDLDNSIDIQQTIQHQQQQPQQQQQLSQTDNNLIDEFSF 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 DQEKGKEEKKDTAFQTSFDRNFDLDNSIDIQQTIQHQQQQPQQQQQLSQTDNNLIDEFSF 120

Qy        121 QTPMTSTLDLTKQNPTVDKVNENHAPTYINTSPNKSIMKKATPKASPKKVAFTVTNPEIH 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 QTPMTSTLDLTKQNPTVDKVNENHAPTYINTSPNKSIMKKATPKASPKKVAFTVTNPEIH 180

Qy        181 HYPDNRVEEEDQSQQKEDSVEPPLIQHQWKDPSQFNYSDEDTNASVPPTPPLHTTKPTFA 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 HYPDNRVEEEDQSQQKEDSVEPPLIQHQWKDPSQFNYSDEDTNASVPPTPPLHTTKPTFA 240

Qy        241 QLLNKNNEVNSEPEALTDMKLKR 263
              |||||||||||||||||||||||
Db        241 QLLNKNNEVNSEPEALTDMKLKR 263
```

Amino acids 1-263 of SEQ ID NO 1.

```
RESULT 1
AAW99462
ID   AAW99462 standard; Protein; 1664 AA.
XX
AC   AAW99462;
XX
DT   08-JUN-1999  (first entry)
XX
DE   C.albicans alpha-INT1p protein.
XX
KW   Integrin-like motif; vaccine; immune response; antibody; inhibition;
KW   adhesion; endothelial cell; pathogenesis; infection; probe.
XX
OS   Candida albicans.
XX
PN   US5886151-A.
XX
PD   23-MAR-1999.
XX
PF   03-MAY-1996;   96US-0642846.
XX
PR   03-MAY-1996;   96US-0642846.
XX
PA   (MINU ) UNIV MINNESOTA.
XX
PI   Bendel CM,  Gale CA,  Hostetter MK,  Kendrick K,  Tao NJ;
XX
DR   WPI; 1999-242618/20.
DR   N-PSDB; AAX25885.
XX
PT   New isolated Candida albicans protein with integrin-like motifs
XX
PS   Examples; Column 13-14; 21pp; English.


XX
CC   This sequence represents the Candida albicans alpha-INT1 protein which
CC   contains integrin-like motifs. The protein was used to derive peptides
CC   AAW99456-W99461 used for producing vaccines for stimulating an immune
CC   response.  The antibodies can inhibit the adhesion of C.albicans to
CC   cells, particularly endothelial cells.  This blocking activity of the
CC   adhesion to cells can reduce or prevent subsequent events in the
CC   pathogenesis of invasive candidal infection.
XX
SQ   Sequence   1664 AA;

  Query Match           100.0%;  Score 1386;  DB 20;  Length 1664;
  Best Local Similarity  100.0%;  Pred. No. 5e-107;
  Matches  263;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps

Qy       1 MNSTPSKLLPIDKHSHLQLQPQSSSASIFNSPTKPLNFPRTNSKPSLDPNSSSDTYTSEQ 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MNSTPSKLLPIDKHSHLQLQPQSSSASIFNSPTKPLNFPRTNSKPSLDPNSSSDTYTSEQ 60

Qy      61 DQEKGKEEKKDTAFQTSFDRNFDLDNSIDIQQTIQHQQQQPQQQQQLSQTDNNLIDEFSF 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 DQEKGKEEKKDTAFQTSFDRNFDLDNSIDIQQTIQHQQQQPQQQQQLSQTDNNLIDEFSF 120

Qy     121 QTPMTSTLDLTKQNPTVDKVNENHAPTYINTSPNKSIMKKATPKASPKKVAFTVTNPEIH 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 QTPMTSTLDLTKQNPTVDKVNENHAPTYINTSPNKSIMKKATPKASPKKVAFTVTNPEIH 180

Qy     181 HYPDNRVEEEDQSQQKEDSVEPPLIQHQWKDPSQFNYSDEDTNASVPPTPPLHTTKPTFA 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 HYPDNRVEEEDQSQQKEDSVEPPLIQHQWKDPSQFNYSDEDTNASVPPTPPLHTTKPTFA 240

Qy     241 QLLNKNNEVNSEPEALTDMKLKR 263
          |||||||||||||||||||||||
Db     241 QLLNKNNEVNSEPEALTDMKLKR 263
```

Amino acids 218-263 of SEQ ID NO.1 containing the FAQLLNKNNEVNSEPE sequence.

```
RESULT 5
US-08-642-846-3
; Sequence 3, Application US/08642846
; Patent No. 5886151   & US 6,774,219
;  GENERAL INFORMATION:
;    APPLICANT:  HOSTETTER, MARGARET K.
;    APPLICANT:  GALE, CHERYL A.
;    APPLICANT:  BENDEL, CATHERINE M.
;    APPLICANT:  TAO, NIAN-JUN
;    APPLICANT:  KENDRICK, KATHLEEN
;    TITLE OF INVENTION:  CANDIDA ALBICANS GENE, INTEGRIN-LIKE
;    TITLE OF INVENTION:  PROTEIN, ANTIBODIES, AND METHODS OF USE
;    NUMBER OF SEQUENCES:  12
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MUETING, RAASCH, GEBHARDT & SCHWAPPACH, P.A.
;      STREET:  119 NORTH FOURTH STREET, SUITE 203
;      CITY:  MINNEAPOLIS
;      STATE:  MINNESOTA
;      COUNTRY:  USA
;      ZIP:  55401
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/642,846
;      FILING DATE:  03-MAY-1996
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  MUETING, ANN M.
;      REGISTRATION NUMBER:  33,977
;      REFERENCE/DOCKET NUMBER:  110.00280101
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  612-305-1217
;      TELEFAX:  612-305-1228
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  236 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FEATURE:
;      OTHER INFORMATION:  amino acid positions 218-453 from SEQ ID NO:2
US-08-642-846-3

  Query Match            17.4%;  Score 241;  DB 2;  Length 236;
  Best Local Similarity  100.0%;  Pred. No. 4.1e-14;
  Matches   46;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy     218 SDEDTNASVPPTPPLHTTKPTFAQLLNKNNEVNSEPEALTDMKLKR 263
           |||||||||||||||||||||||||||||||||||||||||||||||
Db       1 SDEDTNASVPPTPPLHTTKPTFAQLLNKNNEVNSEPEALTDMKLKR 46
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